

Federal Communications Commission
2006 Biennial Regulatory Review
ET Docket No. 06-155

Office of Engineering and Technology
Staff Report
February 14, 2007

I. OVERVIEW

1. The Office of Engineering and Technology (OET) provides technical and engineering support to all of the bureaus and offices, as well as to the Commission. OET has primary responsibility for the management and allocation of non-Federal Government spectrum, the authorization of telecommunications equipment and radio frequency (RF) regulated devices, and the administration of the Experimental Radio Service. OET has specific responsibility for Parts 2, 5, 15, and 18 of the Commission's Rules,¹ and – between December 2004 and September 2006 – had specific responsibility for Part 4 of the Commission's Rules.² All of the rules governing these responsibilities were reviewed by staff to determine whether those rules that govern providers of telecommunications services are no longer necessary in the public interest as the result of meaningful economic competition, as provided in Section 11 of the Communications Act of 1934, as amended.³ As part of this review, OET sought recommendations from the public regarding which rules and procedures should be modified or eliminated as part of its Section 11 review.⁴

II. SCOPE OF REVIEW

2. The Office of Engineering and Technology staff reviewed all of the rules that the Office administers. Specifically, the staff reviewed:

Part 2, Subpart A: Terminology – This subpart provides definitive terms and definitions for words and phrases used throughout the Commission's Rules.

Part 2, Subpart B: Allocation, Assignment, and Use of Radio Frequencies – This subpart contains the Table of Frequency Allocations, which designates the uses of each frequency band and provides the basic framework for each radio service's rules.

Part 2, Subpart C: Emissions – This subpart designates emission, modulation and transmission characteristics of radio signals and the symbology to be used to identify them, and defines and provides formulas for "occupied bandwidth" and "necessary bandwidth."

Part 2, Subpart D: Call Signs and Other Forms of Identifying Radio Transmissions – This subpart provides a system of distinctive call signs for each domestic and

¹ 47 C.F.R. Parts 2, 5, 15 and 18.

² 47 C.F.R. Part 4. Part 4 is now administered by the FCC's new Public Safety and Homeland Security Bureau, which came into existence in September 2006. *See Public Notice, FCC Announces Launch of Public Safety and Homeland Security Bureau*, September 26, 2006, available on-line at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-267599A1.pdf.

³ 47 U.S.C. § 161.

⁴ *See The Commission Seeks Public Comment in the 2006 Biennial Review of Telecommunications Regulations*, ET Docket No. 06-155, *Public Notice*, 21 FCC Rcd 9422 (2006).

international station using radio frequencies, and provides for alternative forms of identification for certain classes of stations.

Part 2, Subpart E: Distress, Disaster, and Emergency Communications – This subpart provides for the priority and control of distress messages and emergency communications.

Part 2, Subpart H: Prohibition Against Eavesdropping – This subpart prohibits the use of a radio device for eavesdropping on private conversations, unless authorized by all of the parties in the conversation; the prohibition expressly does not apply to law enforcement officers operating under lawful authority.

Part 2, Subpart I: Marketing of Radiofrequency Devices – This subpart provides that radiofrequency devices must comply with the appropriate equipment authorization requirements prior to importation or marketing in the U.S.

Part 2, Subpart J: Equipment Authorization Procedures – This subpart describes the general equipment authorization procedures for regulated equipment that generates radiofrequency energy.

Part 2, Subpart K: Importation of Devices Capable of Causing Harmful Interference – This subpart provides for the temporary or limited importation of certain devices that would normally need an equipment authorization, such as devices intended for display at trade shows or for testing and developmental purposes, as well as subassemblies and certain unintentional radiators.

Part 2, Subpart M: Advance Approval of Subscription TV Transmission Systems – This subpart provides for the approval of any transmission system that will be used for providing subscription television service.

Part 2, Subpart N: FCC Procedure for Testing Class A, B and S Emergency Position Indicating Radiobeacons (EPIRBs) – This subpart sets out the approved procedures for testing EPIRBs.

Part 4 – Disruptions to Communications – This Part sets forth requirements pertinent to the reporting of disruptions to communications and to the reliability and security of communications infrastructures.

Part 5 – Experimental Radio Services (Other Than Broadcast) – This Part provides for the licensing of radio facilities in order to conduct experimental operations.

Part 15 – Radio Frequency Devices – This Part provides technical requirements for low power radio transmitters and other radio frequency devices to prevent interference to authorized radio services.

Part 18 – Industrial Scientific, and Medical Equipment – This Part provides for noncommunications uses of radiofrequency energy for industrial, scientific and medical purposes.

III. RECENT AND ONGOING ACTIVITIES

3. OET has responsibility for authorizing RF equipment and devices and for maintaining the Commission's Part 2 Table of Frequency Allocations. OET plays a significant role in ensuring that the Commission continually modifies its rules to accommodate new technologies and associated services, while protecting the operations of incumbent service providers. Through various spectrum management efforts, OET has helped the Commission facilitate new, innovative, and competitive services, while eliminating rules that are no longer in the public interest.

4. During the past two years, the Commission has undertaken specific efforts to advance the goals of efficient and effective spectrum management in light of increased competition in the provision of telecommunications services. As a result, it has adopted several rulemaking items that accommodate the introduction of advanced technologies and has reviewed and modified its rules to support these decisions. These technologies and services provide a wide range of new consumer and industrial uses.

5. One of the most important Commission undertakings in recent years has been the transition from analog television to Digital Television (DTV). DTV is already providing the public with an enhanced level of picture and sound quality and will do so increasingly in the future. During the past two years, the Commission took two important actions with regard to this transition. First, it mandated that manufacturers of television sets meet the following timetable for equipping sets with built-in digital tuners: (1) July 1, 2005 for screen sizes of 36 inches or more; (2) July 1, 2006 for screen sizes of 25 inches or more; and (3) July 1, 2007 for screen sizes of 13 inches or more, as well as for all other TV receiving devices.⁵ Second, the Commission proposed to amend its rules to include measurement procedures for determining the strength of a DTV signal at any specific location. These procedures would be used as a means of determining whether households are eligible to receive distant DTV network signals retransmitted by satellite carriers.⁶

6. In another recent undertaking, the Commission decided to permit low power fixed devices to operate in the broadcast spectrum at locations where channels are not in use by TV stations or other authorized services, subject to further proceedings to develop technical and regulatory requirements. This action could enable the development of new and innovative types of devices and services for businesses and consumers. To

⁵ See *Requirements for Digital Television Receiving Capability*, ET Docket No. 05-24, *Report and Order and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 11196 (2005).

⁶ See *Measurement Standards for Digital Television Signals Pursuant To the Satellite Home Viewer Extension and Reauthorization Act of 2004*, ET Docket No. 06-94, *Notice of Proposed Rulemaking*, 21 FCC Rcd 4735 (2006).

safeguard incumbent services in the TV bands, the Commission declined to permit operation on TV channel 37 that is used by radio astronomy and wireless medical telemetry services; and on TV channels 52-69, which have been reallocated for public safety and other mobile services. The Commission also declined to permit operation of personal/portable devices on TV channels 14-20, which are used by public safety services in 13 cities, leaving for further consideration the issue of whether fixed devices might be used in that band. The Commission decided to permit marketing of low power devices to commence on February 18, 2009 – the day after the DTV transition is scheduled to be completed and all TV stations are in operation on their permanent DTV channels.⁷

7. Another significant Commission undertaking during the past two years has been its promotion of broadband services in various proceedings. First, the Commission continued its ongoing efforts to introduce Advanced Wireless Services (AWS).⁸ Advanced wireless systems can provide a wide range of voice, data and broadband services over a variety of mobile and fixed networks in the 1700/2100 MHz band range. In 2005, the Commission reallocated the 2155-2160 MHz band for Fixed and Mobile services and designated the 2155-2175 MHz band for AWS use.⁹ In 2006, the Commission auctioned 90 megahertz of AWS spectrum at 1710-1755 MHz and 2110-2155 MHz and received net winning bids of \$13.7 billion.¹⁰ Also in 2006, the Commission established procedures by which AWS licensees may relocate incumbent Broadband Radio Service (BRS) and Fixed Microwave Service (FS) operations in spectrum that has been allocated for AWS. These procedures will promote the rapid deployment of broadband, voice, and data services to the public by new AWS licensees, and also will minimize the disruption to incumbent BRS and FS licensees during the relocation process. The relocation rules affect existing BRS operations in the 2150-2160/62 MHz band and FS operations in the 2110-2150 MHz and 2160-2200 MHz bands. The Commission also established cost sharing obligations for AWS and Mobile Satellite Service entrants that benefit from the relocation of FS and BRS operations in

⁷ See *Unlicensed Operation in the TV Broadcast Bands and Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, ET Docket Nos. 04-186 and 02-380, *First Report and Order and Further Notice of Proposed Rulemaking*, FCC 06-156, released October 18, 2006.

⁸ Advanced Wireless Services is the collective term we use for new and innovative fixed and mobile terrestrial wireless applications using bandwidth that is sufficient for the provision of a variety of applications, including those using voice and data (such as internet browsing, message services, and full-motion video) content. Although AWS is commonly associated with so-called third generation (3G) applications and has been predicted to build on the success of such current-generation commercial wireless services as cellular and Broadband PCS, the services ultimately provided by AWS licensees are only limited by the fixed and mobile designation of the spectrum we allocate for AWS and the service rules we ultimately adopt for the bands.

⁹ See *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, ET Docket No. 00-258, *Eighth Report and Order, Fifth Notice of Proposed Rule Making, and Order*, 20 FCC Rcd 15866 (2005).

¹⁰ See http://wireless.fcc.gov/auctions/default.htm?job=auction_factsheet&id=66.

these bands.¹¹ These relocation procedures were based in large part on existing rules, which were updated and modified accordingly.

8. Second, with regard to promoting broadband services, the Commission affirmed in general and clarified certain of its rules for Access Broadband over Power Line (Access BPL) systems, while maintaining safeguards against harmful interference to existing radio services. The Commission's Part 15 rules for RF devices have long provided for operation of carrier current systems, which are devices that couple RF energy onto the electric power lines for communication purposes. More recently, the availability of faster digital processing capabilities and the development of sophisticated modulation schemes have allowed the development of new types of carrier current systems that use spread spectrum or multiple carrier techniques capable of delivering high-speed communications. These systems carry broadband digital signals and have come to be called BPL systems. The Commission acknowledged the significant benefits of Access BPL in providing a new facilities-based broadband platform, and reaffirmed its commitment to address interference issues.¹² To accomplish this task, the Commission carefully considered the construction and operation of the Part 15 rules that apply to BPL operations, and adopted additional rules specific to BPL to ensure both its technical viability and its compatibility with incumbent users of the frequency bands it will utilize.

9. Third, with regard to promoting broadband services, the Commission adopted rules to open access to new spectrum for wireless broadband services in the 3650-3700 MHz (3650 MHz) band. The Commission adopted a hybrid approach that draws from both the Commission's unlicensed and licensed regulatory models and provides for nationwide, non-exclusive licensing of terrestrial operations in the band. This streamlined licensing mechanism with minimal regulatory entry requirements will encourage multiple new entrants and stimulate the rapid expansion of wireless broadband services – especially in rural America – by Wireless Internet Service Providers and other entities with limited resources. The Commission also provided an opportunity for the introduction at 3650 MHz of a variety of new wireless broadband technologies into the band.¹³

¹¹ See *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems and Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, ET Docket No. 00-258 and WT Docket No. 02-353, *Ninth Report and Order and Order*, 21 FCC Rcd 4473 (2006).

¹² See *Current Systems, including Broadband over Power Line Systems and Amendment of Part 15 Regarding New Requirements and Measurement Guidelines for Access Broadband over Power Line Systems*, ET Docket Nos. 03-104 and 04-37, *Memorandum Opinion And Order*, 21 FCC Rcd 9308 (2006).

¹³ See *Wireless Operations in the 3650-3700 MHz Band; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band; Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band*, ET Docket No. 04-151, WR Docket No. 05-96, ET Docket No. 02-380; ET Docket No. 98-237; *Report and Order and Memorandum Opinion And Order*, 20 FCC Rcd 6502 (2005).

10. Additionally, the Commission took action during the past two years to facilitate the use of cognitive, or “smart,” radio systems. Smart radios have the technical capability to adapt their use of spectrum in response to information external to the radio. For instance, a system could use geographic positioning system data to determine its exact location, then determine whether certain transmissions are permissible based on that location. Alternatively, such radios could sense their operating or RF environment and use this information to determine both the optimal frequency range and transmit power to use, yet avoid harmful interference. Many smart radios can also interpret and transmit signals in different formats or modulation schemes in an effort to transmit without harming others in the vicinity. The Commission reviewed the authorization requirements for software defined and cognitive radios and subsequently modified and clarified certain of these requirements in order to facilitate the development of these technologies. It required that radios that incorporate software designed to be, or expected to be, modified by a party other than the manufacturer provide reasonable security measures to prevent unauthorized software modifications that would either affect the RF operating parameters directly or otherwise indirectly affect the circumstances under which the transmitter operates in accordance with Commission rules.¹⁴

11. The Commission also took action during the past two years to provide greater flexibility and innovation in the use of ultra-wideband (UWB) devices. Several categories of UWB devices are permitted to operate under Part 15 regulations without a requirement for an individual license: imaging systems, vehicular radars, and indoor and outdoor communication systems. UWB transmitters operate using spectrum that is allocated to various radio services, including frequency bands that are allocated both to Federal Government and to non-Federal Government operations. The Commission granted a waiver to permit radiated emissions from certain types of UWB transmitters to be measured while the transmitter is in normal operating mode.¹⁵

12. Further, the Commission took action during the past two years to facilitate the use of the 5.15-5.35 GHz and 5.47-5.825 GHz bands by unlicensed National Information Infrastructure (U-NII) devices, including Radio Local Area Networks. U-NII devices are intentional radiators that use wideband digital modulation techniques and provide a wide array of high data rate mobile and fixed communications for individuals, businesses, and institutions. The Commission reviewed and clarified the rules for U-NII devices in the 5.25-5.35 GHz and 5.47-5.725 GHz bands and issued revised measurement procedures for equipment authorizations.¹⁶

¹⁴ See *Facilitating Opportunities for Flexible, Efficient, and Reliable Spectrum Use Employing Cognitive Radio Technologies*, ET Docket No. 03-108, *Report and Order*, 20 FCC Rcd 5486 (2005).

¹⁵ See *Petition for Waiver of the Part 15 UWB Regulations Filed by the Multi-band OFDM Alliance Special Interest Group*, ET Docket No. 04-352, *Order*, 20 FCC Rcd 5528 (2005).

¹⁶ See *Revision of Parts 2 and 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, ET Docket No. 03-122, *Memorandum Opinion And Order*, 21 FCC Rcd 7672 (2006). See also 47 C.F.R. Part 15 Subpart E – Unlicensed National Information Infrastructure Devices.

13. The Commission also initiated a proceeding during the past two years to establish a new service for advanced medical radio communication (MedRadio) devices in the 401-406 MHz band. The Commission noted that an ever-increasing number of medical devices are coming to rely upon radio transmissions for critical aspects of their functionality. These devices are improving the health care of all Americans by providing relief and recovery of function from many types of illness and injury. The Commission proposed designating an additional two megahertz of spectrum for these devices, at 401-402 MHz and 405-406 MHz, adjacent to the existing Medical Implant Communications Service band at 402-405 MHz, for a total of 5 megahertz specifically designated for medical device radiocommunications. It also proposed adopting more flexible operating rules in at least part of the band to accommodate a greater variety of devices.¹⁷

14. Additionally, during the past two years, the Commission specified the procedures by which a total of 40 Private Land Mobile Radio (PLMR) channels, which are located in frequency bands that are allocated primarily for Federal Government use, are to transition to narrower, more spectrally efficient channels in a process commonly known as “narrowbanding.” This action provide for continued primary and secondary operations in Federal bands that are being narrowbanded by the National Telecommunications and Information Administration (NTIA),¹⁸ while generally maintaining the narrowbanding procedures that currently apply to all PLMR services in the 150-174 MHz and 421-512 MHz bands.¹⁹

15. The Commission also took action during the past two years in two proceedings related to implementing decisions made at World Radiocommunication Conferences. In the first proceeding, it made numerous amendments to Parts 2, 25, 73, 90, and 97 of the Commission’s Rules in order to implement allocation changes to the frequency range between 5900 kHz and 27.5 GHz in furtherance of decisions that were made at the 2003 World Radiocommunication Conference and to otherwise update the Commission’s Rules in this frequency range.²⁰ In the second proceeding, it denied a

¹⁷ See *Investigation of the Spectrum Requirements for Advanced Medical Technologies; Amendment of Parts 2 and 95 of the Commission’s Rules to Establish the Medical Device Radio Communications Service at 401-402 and 405-406 MHz; DexCom, Inc. Request for Waiver of the Frequency Monitoring Requirements of the Medical Implant Communications Service Rules; Biotronik, Inc. Request for Waiver of the Frequency Monitoring Requirements for the Medical Implant Communications Service Rules*; ET Docket No. 06-135, RM-11271, ET Docket No. 05-213, and ET Docket No. 03-92; *Notice of Proposed Rulemaking, Notice of Inquiry, And Order*, 21 FCC Rcd 8164 (2006).

¹⁸ The NTIA serves as the President’s principal adviser on telecommunication and information policies and as manager of the Federal Government’s use of the radio spectrum. 47 U.S.C. § 902(b)(2).

¹⁹ See *Amendment of Parts 2 and 90 of the Commission’s Rules to Provide for Narrowband Private Land Mobile Radio Channels in the 150.05-150.8 MHz, 162-174 MHz, and 406.1-420 MHz Bands that are Allocated for Federal Government Use*; ET Docket No. 04-243; *Report and Order*, 20 FCC Rcd 5793 (2005).

²⁰ See *Amendment of Parts 2, 25, and 73 of the Commission’s Rules to Implement Decisions from World Radiocommunication Conference (Geneva, 2003) (WRC-03) Concerning Frequency Bands Between 5900 kHz and 27.5 GHz and to Otherwise Update the Rules in this Frequency Range*, *Report and Order*, 20 FCC Rcd 6570 (2005).

petition for reconsideration of a Commission Order, which, *inter alia*, had deleted an unused Broadcasting Satellite Service allocation from the band 2500-2690 MHz and removed a related footnote from the Table of Frequency Allocations.²¹

16. The Commission anticipates that new spectrum allocations, rules and principles will enable a broad range of new competitive radio communications services, such as expanded wireless services, advanced mobile services, and new spectrum-efficient private land mobile systems. The development of a broad range of new devices and communications options will stimulate economic development and the growth of new industries and promote the ability of manufacturers, including small businesses and entrepreneurs, to compete both domestically and globally. In this regard, the Commission recently sought comment on creation of a spectrum sharing innovation test-bed. The Commission and NTIA seek to evaluate innovative methods for spectrum sharing among disparate users to enable more intensive use of the radio spectrum. One way of accomplishing this task is to set up a test-bed where both Federal and non-Federal users can undertake one or more studies and experiments to test these ideas. The Commission sought comment on a wide range of issues that are integral to the creation of such a test-bed, including its goals and the amount of spectrum and frequency bands to be used.²²

17. Finally, during the past two years, the Commission took action on an important initiative related to homeland security in the Communications Assistance for Law Enforcement Act (CALEA) proceeding. The *First Report and Order* in that proceeding determined that CALEA applies to facilities-based broadband Internet access providers and providers of interconnected Voice over Internet Protocol service, and the *Second Report and Order* addressed several issues regarding CALEA implementation.²³ The Commission's primary policy goal in this proceeding is to ensure that law enforcement agencies have all of the resources that CALEA authorizes to combat crime and support homeland security, while at the same time safeguarding consumer privacy.

²¹ See *Amendment of Parts 2, 25, and 87 of the Commission's Rules to Implement Decisions from World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range and Amendment of Parts 2 and 25 of the Commission's Rules to Allocate Spectrum for Government and non-Government Use in the Radionavigation-Satellite Service*, ET Docket No. 04-139 and RM-10331, *Order on Reconsideration*, 21 FCC Rcd 5492 (2006).

²² See *Federal Communications Commission Seeks Public Comment On Creation of a Spectrum Sharing Innovation Test-Bed*, ET Docket No. 06-89, *Public Notice*, 21 FCC Rcd 6693 (2006).

²³ See *Communications Assistance for Law Enforcement Act and Broadband Access and Services*, ET Docket No. 04-295, *First Report and Order and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 14989 (2005); *Second Report and Order and Memorandum Opinion and Order*, 21 FCC Rcd 5360 (2006).

IV. SUMMARY OF BIENNIAL REGULATORY REVIEW

18. As further discussed in the appendix, the various rules directly within the purview of OET generally do not directly apply to the operations or activities of any telecommunications service provider, and thus are outside the specific scope of the review described by Section 11 of the Act. Moreover, the public interest need for the rules implemented by OET are generally unaffected by the degree of economic competition among those entities covered by these rules. We note, however, that we received two comments and three reply comments in response to our August 2006 *Public Notice*.²⁴ OET has reviewed these comments and reply comments and finds that minor revisions to sections 2.1204 and 15.19(b)(3) of the Commission's Rules may be desirable. Accordingly, we recommend to the Commission that it issue a Notice of Proposed Rulemaking to consider these revisions.

19. This Staff Report describes OET's extensive efforts in the last two years to update its rules to facilitate new technologies and services for the public and to provide for increased competition in the provision of services. It also describes OET's comprehensive review of the Commission's regulations pertaining to the allocations of non-government spectrum, the authorization of telecommunications equipment and RF-regulated devices and industrial, scientific and medical equipment, and the administration of the Experimental Radio Service. Additionally, the staff determines that the rules within its purview generally do not directly apply to the operations or activities of any telecommunications service providers, and thus would not be subject to revision under Section 11.

²⁴ See n.4, *supra*.

APPENDIX I: RULE PART ANALYSIS**PART 2, SUBPART A - TERMINOLOGY****Description**

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

This subpart provides definitive terms and definitions for words and phrases used throughout the Commission's Rules.

Analysis**Status of Competition**

There are no competitive considerations related to the terms and definitions in this subpart.

Advantages

This rule part provides for a common understanding and interpretation of technical and administrative terms and terms of art used in the Commission's Rules.

Disadvantages

None.

Comments

There were no comments received regarding this subpart.

Recommendation

These rules do not directly apply to the activities and operations of providers of telecommunications services. Thus, they are not within the scope of the instant Section 11 review.

PART 2, SUBPART B – ALLOCATION, ASSIGNMENT, AND USE OF RADIO FREQUENCIES**Description**

Section 303(c) of the Communications Act of 1934, as amended, authorizes the Commission to “assign bands of frequencies to the various classes of stations.” Part 2, subpart B implements this authority and contains the Table of Frequency Allocations which identifies the services allowed in each frequency band.

Purpose

The Table of Frequency Allocations provides a basic framework for each radio service’s rules.

Analysis**Status of Competition**

The Commission is continually amending the Table of Frequency Allocations to provide spectrum for the expansion of existing services and for new services, and for the diminution of spectrum for services which do not efficiently utilize the spectrum allocated.

Advantages

The Table of Frequency Allocations sets out what radio services are permitted in each frequency band and the primary or secondary status of each. Users are informed of what other classes of stations may enter the band or adjacent bands and what priority exists with respect to other uses.

Disadvantages

For some new radio technologies, a two-step process is needed to implement their use: first the allocation table is amended, and then the service rules are adopted. On occasion, the Commission combines these two steps.

Comments

There were no comments received regarding the Table of Frequency Allocations and related rules.

Recommendation

The Table of Frequency Allocations and related rules continue to serve the public interest purpose of ensuring the orderly and efficient use of the spectrum by a myriad of different service providers and other users of the spectrum. While changes in the competitive landscape often require changes in the Table, that process is ongoing. Staff does not find, however, that these rules are no longer necessary in the public interest as the result of

meaningful economic competition between telecommunications service providers. OET finds that the rules currently remain necessary in the public interest and recommends retaining the Table in its current form and continuing the present procedure of incremental change as the need arises.

PART 2, SUBPART C - EMISSIONS**Description**

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 2, subpart C, designates emission, modulation and transmission characteristics of radio signals and the symbology to be used to identify them, and defines and provides formulas for “occupied bandwidth” and “necessary bandwidth.”

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subpart C.

Advantages

This rule part provides necessary definitions for common understanding of emissions and bandwidth concepts to be applied in interpreting the Commission’s Rules.

Disadvantages

None

Comments

There were no comments received regarding emissions or bandwidth provisions.

Recommendation

These rules serve a public interest purpose because they provide necessary definitions for common understanding of emissions and bandwidth concepts to be applied in interpreting the Commission’s Rules. Since these definitions are competitively neutral, the question of whether they are necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

PART 2, SUBPART D – CALL SIGNS AND OTHER FORMS OF IDENTIFYING RADIO TRANSMISSIONS**Description**

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices and to “assign bands of frequencies to the various classes of stations.”

Purpose

Part 2, subpart D provides a system of distinctive call signs for each domestic and international station using radio frequencies, and provides for alternative forms of identification for certain classes of stations.

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subpart D.

Advantages

This rule part ensures that the transmission of any station using radio frequencies can be identified, in order to eliminate harmful interference and to generally enforce the applicable radio treaties, conventions, regulations, arrangements, and agreements in force.

Disadvantages

None

Comments

There were no comments received regarding call signs and alternative forms of identification.

Recommendation

These rules serve a public interest purpose because they ensure that the transmission of any station using radio frequencies can be identified, in order to eliminate harmful interference and to generally enforce the applicable radio treaties, conventions, regulations, arrangements, and agreements in force. Since these rules are competitively neutral, the question of whether they are necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

**PART 2, SUBPART E – DISTRESS, DISASTER, AND EMERGENCY
COMMUNICATIONS**

Description

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices, and to assign bands of frequencies to the various classes of stations.

Purpose

Part 2, subpart E provides for the priority and control of distress messages and emergency communications.

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subpart E.

Advantages

This rule part ensures that distress messages from ships or aircraft receive priority, and provides for flexibility in frequency usage during emergencies, including implementation of requests by the armed services.

Disadvantages

Prioritizing distress signals may disrupt other communications; providing for emergency operation on unassigned frequencies may disrupt other communications.

Comments

There were no comments received regarding distress and emergency communications.

Recommendation

These rules serve a public interest purpose because they ensure that distress messages from ships or aircraft receive priority, and they provide for flexibility in frequency usage during emergencies, including implementation of requests by the armed services. These public interest benefits outweigh the disadvantages set forth above. Since the regulations in this Rule Part are competitively neutral, the question of whether they are necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

PART 2, SUBPART H – PROHIBITION AGAINST EAVESDROPPING**Description**

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 2, subpart H, prohibits the use of a radio device for eavesdropping on private conversations, unless authorized by all of the parties in the conversation; the prohibition expressly does not apply to law enforcement officers operating under lawful authority.

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subpart H.

Advantages

This rule part prevents eavesdropping by means of radio devices.

Disadvantages

None

Comments

There were no comments received regarding the eavesdropping prohibition.

Recommendation

This regulation serves a public interest purpose because it prohibits unauthorized eavesdropping. Since this regulation is competitively neutral, the question of whether it is necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

**PART 2, SUBPART I– MARKETING OF RADIOFREQUENCY DEVICES;
SUBPART J – EQUIPMENT AUTHORIZATION PROCEDURES;
SUBPART K – IMPORTATION OF DEVICES CAPABLE OF CAUSING
HARMFUL INTERFERENCE**

Description

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 2, subpart I, provides that radiofrequency devices must comply with the appropriate equipment authorization requirements prior to importation or marketing in the U.S. Subpart J describes the general equipment authorization procedures for regulated equipment that generates radiofrequency energy. Subpart K provides for the temporary or limited importation of certain devices that would normally need an equipment authorization, such as devices intended for display at trade shows or for testing and developmental purposes, as well as subassemblies and certain unintentional radiators.

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subparts I or K. The status of competition with respect to subpart J cannot be summarily characterized because of the variety of services and markets affected by this rule subpart.

Advantages

Subpart I prevents a proliferation of interference by unlicensed radio devices and unintentional radiators. Subpart J delineates procedures and requirements for compliance with technical standards for radio frequency equipment, thereby promoting efficient use of radio spectrum. Subpart K provides relief for the importation of certain devices that do not pose the threat of interference for which the equipment authorization rules were promulgated.

Disadvantages

Subpart I rules introduce some cost and delay into the introduction of new radiofrequency devices. Subpart J requirements impose some regulatory costs on equipment manufacturers and the required approvals may slow market entry slightly. There may be some potential for interference from devices imported under subpart K that are not used in strict conformance with the provisions of the rules.

Comments

There were no comments received regarding subparts I and J. With respect to subpart K, the Hewlett-Packard Company (HP) filed a comment to the August 10, 2006 *Public*

Notice, in which it recommended a change to section 2.1204 of the Commission's Rules. HP notes that this section limits to 200 or fewer units the importation of radio frequency devices that have not yet received an equipment authorization, and recommends that this limit be increased to 1200 units. HP also recommends that, for RF units of between 200 and 1200, the importer be required to comply with rigorous FCC reporting requirements, reflected in a quarterly report. The Information Technology Industry Council filed a reply comment supporting HP's recommendations.

Recommendation

These subparts do not directly apply to the activities and operations of providers of telecommunications services. Thus, they are not within the scope of the instant Section 11 review.

We nevertheless concur with HP's recommendation to raise the limit on the number of RF units that can be imported without an equipment authorization in order to better reflect current manufacturing, design, and marketing techniques, and to decrease the administrative burden on both industry and the Commission. However, we believe, based on our experience with recent equipment importation requests, that a lower limit than that requested might achieve an appropriate balance between easing the manufacturing process and our interest in maintaining appropriate controls on the importation of such devices. Accordingly, we recommend that the Commission issue a Notice of Proposed Rulemaking that will propose to modify section 2.1204 of the Commission's Rules to increase the number of RF units that can be imported without an equipment authorization. We believe that it is unnecessary to implement a quarterly reporting system because that would create an unnecessary administrative burden on both importers and the Commission. The same benefit can be achieved by requiring importers to maintain records of their imports under these provisions, so that we can request this information if needed.

**PART 2, SUBPART M – ADVANCE APPROVAL OF SUBSCRIPTION TV
TRANSMISSION SYSTEMS**

Description

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 2, subpart M, provides for the approval of any transmission system that will be used for providing subscription television service.

Analysis**Status of Competition**

There are no competitive considerations with regard to the rules in Part 2, subpart M.

Advantages

This subpart ensures that subscription television systems will not interfere with other authorized services and devices.

Disadvantages

None.

Comments

There were no comments received regarding this subpart.

Recommendation

These regulations serve a public interest purpose because they help ensure that subscription television operations do not interfere with other licensed services and devices. Since this regulation is competitively neutral, the question of whether it is necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

**PART 2, SUBPART N – FCC PROCEDURE FOR TESTING CLASS A, BANDS
EMERGENCY POSITION INDICATING RADIOBEACONS (EPIRBS)**

Description

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 2, subpart N sets out the approved procedures for testing EPIRBs.

Analysis

Status of Competition

There are no competitive considerations with regard to the rules in Part 2, subpart N.

Advantages

This subpart provides testing procedures to ensure the proper operation of EPIRBs while avoiding unintentional reception of emergency signals.

Disadvantages

None.

Comments

There were no comments received regarding this subpart.

Recommendation

These regulations serve a public interest purpose because they help ensure the proper operation of EPIRBs while avoiding unintentional reception of emergency signals. Since this regulation is competitively neutral, the question of whether it is necessary in the public interest is unaffected by the degree of meaningful economic competition between providers of telecommunications service. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

PART 4 – DISRUPTIONS TO COMMUNICATIONS

Description

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 4 sets forth requirements pertinent to the reporting of disruptions to communications and to the reliability and security of communications infrastructures.

Analysis

Status of Competition

There are no competitive considerations related to the terms and definitions in this subpart.

Advantages

These rules expand outage-reporting requirements by requiring all communications providers to report to the Commission outages that affect a substantial number of user-minutes. These near real-time outage-reports provide information to the Commission that can be used by the Federal Government to oversee the reliability and security of the Nation's telecommunications networks.

Disadvantages

These rules place an administrative burden upon communications providers to submit near real-time reports. These reports may contain information that submitters consider to be proprietary in nature.

Comments

There were no comments received regarding this subpart.

Recommendation

These rules serve a public interest purpose because they provide the Federal Government with information necessary to oversee the reliability and security of the Nation's telecommunications networks. The rules employ a user-minute reporting metric that properly balances both the duration of the outage and the number of users affected by the outage to determine whether the event is significant enough to warrant reporting to the Federal Government. The reports themselves require only the information necessary to oversee the reliability and security of the Nation's telecommunications networks and are treated in a confidential manner. Thus, we do not conclude that such regulations are no longer necessary in the public interest as the result of meaningful economic competition between telecommunications service providers.

PART 5 - EXPERIMENTAL RADIO SERVICE (OTHER THAN BROADCAST)**Description**

Sections 302 and 303(e) of the Communications Act of 1934, as amended, authorize the Commission to regulate radio devices.

Purpose

Part 5 provides for experimentation in the provision of radio services without causing harmful interference to existing operations. These rules generally do not directly apply to the regulated activities and operations of providers of telecommunications services, and thus are not within the purview of this biennial review, as provided by Section 11 of the Communications Act of 1934, as amended.

Analysis**Status of Competition**

There are no competitive considerations in the experimental radio service.

Advantages

This rule part provides the capability for the development of new radio technologies from temporarily protected facilities which will not cause harmful interference to incumbent service providers, thereby promoting efficient use of radio spectrum.

Disadvantages

The requirements impose some restrictions and regulatory costs on parties seeking to experiment with radio technology and the required approvals may slow development slightly in some cases.

Comments

There were no comments received regarding Part 5 of the Commission's Rules.

Recommendation

These rules do not directly apply to the activities and operations of providers of telecommunications services, and thus are not within the scope of our Section 11 review.

PART 15 - RADIO FREQUENCY DEVICES**Description**

Section 302 of the Communications Act of 1934, as amended, authorizes the Commission to regulate devices which may interfere with radio reception and requires the Commission to adopt regulations forbidding the sale of equipment capable of intercepting domestic cellular radio telecommunications service.

Purpose

The purpose of Part 15 is to provide technical guidance regarding radio devices, including prevention of interference, prohibitions on cellular transmission and reception interception.

Analysis**Status of Competition**

The markets affected by Part 15 are competitive.

Advantages

The requirements of Part 15 are competitively neutral.

Disadvantages

The requirements impose some regulatory costs on equipment manufacturers and the required approvals may slow market entry slightly.

Recent Efforts

The Part 15 rules are continually revised to address evolving technology.

Comments

The Information Technology Industry Council (ITI) filed a comment to the August 10, 2006 *Public Notice*, in which it recommended a change to sections 15.109(g)(1), 15.19(b)(3), and 15.204 of the Commission's Rules, which pertain, respectively, to compliance testing, FCC logo placement, and antenna certification. ITI's proposed change to section 15.109(g)(1) was opposed by Committee C63 (C63) of the American National Standards Institute (ANSI) and its proposed change to section 15.204 was opposed by Itron, Inc. (Itron).

Recommendation

Although we find merit in one aspect of ITI's comments, as discussed below, we nevertheless find that the Part 15 rules do not directly apply to the activities and

operations of providers of telecommunications services, and therefore are outside the scope of this Section 11 review.

We disagree with ITI's proposed changes to sections 15.109(g)(1) and 15.204 of the Commission's Rules. As C63 notes, ITI's proposed change to section 15.109(g)(1) would permit, in some instances, an alternative test method to ANSI's test method, which we find to be less appropriate than ANSI's. Further, as Itron notes, ITI's proposed change to section 15.204 is based on an incorrect premise regarding antenna patterns. Accordingly, we do not recommend that those changes to the Commission's Rules be made. With respect to section 15.19(b)(3), we concur with ITI that, because of the decreasing size of Part 15 devices, manufacturers are having difficulty placing all the required information on the devices. Accordingly, we recommend that the Commission issue a Notice of Proposed Rulemaking to modify section 15.19(b)(3) of the Commission's Rules regarding the placement of required information for Part 15 devices.

PART 18 – INDUSTRIAL, SCIENTIFIC, AND MEDICAL EQUIPMENT**Description**

Section 302 of the Communications Act of 1934, as amended, authorizes the Commission to regulate devices which may interfere with radio reception.

Purpose

The purpose of Part 18 is to provide for the use of industrial, scientific, and medical equipment and appliances that utilize radiofrequency energy for nontelecommunications purposes.

Analysis**Status of Competition**

The markets affected by Part 18 are competitive.

Advantages

The requirements of Part 18 prevent interference to radio services from certain nontelecommunications devices that use RF energy to perform their functions. The requirements of Part 18 are competitively neutral.

Disadvantages

The requirements impose some regulatory costs on equipment manufacturers and the required approvals may slow market entry slightly.

Recent Efforts

The Part 18 rules are periodically revised to address evolving technology.

Comments

There were no comments regarding Part 18 of the Commission's Rules.

Recommendations

The Part 18 rules do not apply to the activities and operations of providers of telecommunications services, and are outside the scope of this Section 11 review.